



Flat-Cinema-TV 40"

40 TK 81

Operating Instructions

## Thank you

Dear customer,  
thank you for choosing a Metz product.

Before using the TV set for the first time, you should read these operating instructions carefully.

Your METZ-WERKE

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# 1. Standards

This monitor is an information-technology device and complies with the following directives and standards of the European Union:

- 89/336/CEE dated 3 May 1989 with subsequent modifications (Directive 92/31/CEE dated April 1992 and Directive 93/68/CEE dated 22 July 1993)
- 73/23/CEE dated 19 February 1973 with subsequent modifications (Directive 93/68/CEE dated 22 July 1993)
- EN55022, EN55024, EN61000-3-2/-3 (Electromagnetic Compatibility)
- EN60065 (Safety Requirements).

The compliance with the requirements of these standards is certified by the markings applied to the device.

# 2. Safety Notes

In order to avoid the risk of injuries and accidents during normal use, you should read and comply with the following safety notes. Incorrect installation or connection of the monitor could result in damage to the monitor itself and to other devices connected to it. Observe the warnings on the monitor and in these operating instructions. Never allow children to operate electrical equipment without supervision.

## General information

The monitor you have purchased complies with the highest quality requirements in this sector and has been inspected for pixel faults in accordance with the strict standard ISO 13406-2, Fault Class II. In spite of the extreme care taken during manufacture, it is still possible, for technological reasons, that a few pixels do not function correctly.

Please note that such pixel faults cannot be regarded as a sufficient reason for warranty claims as long as they do not exceed the limits laid down in the above-mentioned standard.

Under certain circumstances, there may be some hum on the sound channel of the monitor. This normally originates from the main voltage and may be caused by connecting the earthing wires of different devices together. You can prevent it by connecting a so-called sheath-current filter between the incoming antenna cable and the antenna input to the monitor. Such filters, which look like a small adapter, can be purchased from your local dealer.

For technical reasons, the monitor may also generate some noise, but this may not exceed the value shown in the device specification.

If your monitor is connected to an external antenna, this antenna must be earthed to prevent electric shocks and to discharge any static electricity which may be generated. The earth connection must comply with the applicable national regulations.

## Ambient conditions

Never use the monitor in ambient conditions which do not comply with the technical data shown at the end of these operating instructions.

Use of the monitor under other conditions can result in electric shocks, fire or failure of the monitor.

Protect the monitor against moisture. This includes continuous high relative-humidity values, water in the immediate vicinity, water dripping or splashing from other objects and rain. Do not place objects filled with water, such as flower vases, on the monitor. When connecting an external antenna, take care that no water can enter at the point where the antenna cable passes through the external wall.

When installing the monitor, allow it to adapt itself to the temperature in the room in which it is installed. If moisture condenses on the monitor, allow it to evaporate completely before switching on.

If this is not done, there is a risk of electric shocks and irreparable damage to the monitor.

Protect the monitor against high temperatures. Do not expose it to direct sunlight. Do not install it close to fires, radiators or other sources of heat. Take care that the heat generated by the monitor can be dissipated: do not block the ventilation slits. Ensure that there is sufficient space between the ventilation slits and other pieces of furniture (above and below the monitor and on both sides). Do not allow curtains or drapes to hang over the monitor.

If this is not done, the monitor may overheat and may even catch fire.

## Mains connection and operation

In order to safely disconnect the monitor from the mains supply, turn off the main power switch and remove the mains cable from the outlet socket. Connect the monitor only to a correctly installed and earthed mains outlet socket. Make sure that the mains voltage matches the value specified in the technical data of the monitor. Ensure that the mains plug and the outlet socket can be reached easily at any time.

Non-compliance with the above may result in electric shocks, fire or failure of the monitor.

Lay the mains cable so that nobody can trip over it.

If the monitor falls from its table or mounting bracket, persons may be injured and there may be irreparable damage to the monitor.

Use only the mains cable supplied with the monitor. Take care that it is not damaged and do not make any modifications to it. Never use a damaged mains cable. If the mains cable or the plug is damaged, the monitor may not be used, since there is a risk of electric shock, fire or failure of the monitor.

Never touch the mains switch or the mains cable with wet hands. This could result in an electric shock.

Never remove the mains plug from the outlet socket by pulling the cable. Avoid laying the cable in the vicinity of hot objects, since this could result in fire or electric shocks.

Before leaving the monitor unattended for a long period, or in the case of a thunderstorm, remove the mains plug from the outlet socket and remove the plug of the antenna cable from the antenna socket as a precautionary measure to prevent fires and the risk of electric shocks.

Always switch off the monitor and the signal source before connecting them together in order to prevent electric shocks and injuries.

## Faults

If the monitor or its mains cable is damaged in any manner, immediately disconnect the mains cable from the outlet socket.

You should also immediately disconnect the mains cable from the outlet socket if you notice smoke, unpleasant smells or unusual noises emanating from the monitor. The same applies if there is no picture on the screen when you switch on the monitor or during normal operation. Never attempt to continue using the monitor under these conditions.

Never attempt to open or repair the monitor. There are no components inside the monitor which you can repair or replace. In the case of a fault, consult your local dealer.

## Cleaning and care

Incorrect use and cleaning can cause irreparable damage to the monitor. You should therefore observe the following instructions for the cleaning and care of the monitor.

### Handling:

Take great care when handling the screen surface.

Avoid all possible mechanical damage which could result from shocks, pressure, scratches, etc.

Do not touch the screen with sharp or hard objects.

Keep the screen clean.

### Care and cleaning:

Before cleaning the monitor, switch it off and disconnect the mains cable from the outlet socket.

The screen may be cleaned only with a dry soft cloth (such as a microfleece duster). If the screen is very dirty, it may be cleaned with a soft cloth moistened slightly with water. Take care that no water or other liquids drips into the monitor, since this can damage it.

Immediately disconnect the mains cable from the outlet socket if foreign objects, such as water, other liquids, metal objects, etc., fall into the monitor. Never attempt to insert objects of any kind into the monitor and never place your hands inside the monitor, since this can result in an electric shock.

## **Batteries**

If swallowed, batteries can cause serious injuries. For this reason, keep batteries out of reach of children. If someone swallows a battery, consult a doctor immediately.

Remove exhausted batteries immediately from the remote control, since they may leak and damage the remote control.

The batteries enclosed with the monitor may not be recharged, reactivated by any means, taken apart, thrown into a fire or short-circuited.

Exhausted batteries must be disposed of in accordance with local regulations.

## **Other important notes**

Note that the monitor is still connected to the mains voltage when it is switched to standby mode. In order to disconnect it completely from the mains voltage, move the mains switch to the position "O" and/or disconnect the mains cable from the outlet socket.

For ergonomical reasons, it is not advisable to use red or blue fonts or other symbols on a dark background, since the resulting low contrast can result in eyestrain for the user. Wherever possible, select a high-contrast display such as black text on a white background.

In order to avoid eyestrain, the recommended viewing distance is about five to six times the screen diagonal dimension. The illumination in the room should be bright enough to permit reading. If the room is too bright, the screen contrast will be reduced. If the room is too dark, rapid changes in the brightness of the screen display can strain your eyes.

If you wish to connect external loudspeakers, make sure that these comply with the technical data of the loudspeaker output. If the external loudspeakers are too small, the loudspeakers and/or the integrated amplifier may be damaged.

The packing materials used for the monitor are suitable for recycling. When they are no longer needed, dispose of them accordingly.

## 3. Overview

The TFT monitor offers a multitude of connections for external devices such as personal computers, DVD players, video recorders, video cameras, etc.

Regardless of whether the pictures come from the TV receiver, a video recorder or a PC, they are displayed with high resolution and free of distortion on the absolutely flat screen. The screen display is extremely bright and unusually brilliant. Other important features of the monitor are the large size of the screen, with an aspect ratio of 15:9, and the very flat design.

For the reception of TV programmes, a terrestrial antenna, a SAT receiver or a cable receiver is needed.

The monitor is operated interactively with the aid of the enclosed remote control and the on-screen display (OSD), also called the menu. This can be used to make various settings for optimum picture quality.

An innovative cooling system permits the operation of the TFT monitor without the need for noisy fans. The monitor is thus just as quiet as a conventional TV set and ideal for use in living rooms and conference rooms.

### Features

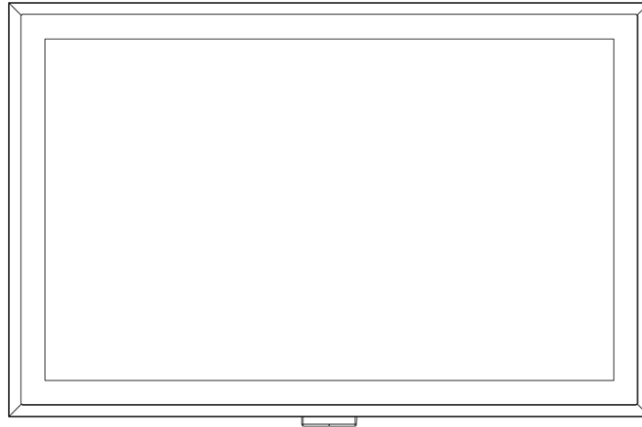
- High-quality aluminium case
- Fan-free design
- Screen diagonal 100 cm
- 15:9 aspect ratio
- Viewing angle, horizontal/vertical 170 degrees
- Digital comb filter
- Compatible with PAL, SECAM and NTSC
- Compatible with VGA, SVGA, WXGA, XGA and SXGA
- Teletext
- Automatic programme identification
- Sleep timer
- 2 x SCART connectors
- 1 x S-Video (mini DIN)
- 1 x Cinch (FBAS video (CCVS))
- 1 x DVI (I) (analogue and digital)

## 3.1 Scope of Delivery

Immediately after receipt, inspect your new TFT monitor for possible transport damage and check that all parts have been delivered. The supplier can accept your claims for transport damage only if you inform him of this before putting the monitor into service for the first time. If anything is missing, please call our service hotline. Keep the packing materials for re-use if you have to transport the monitor again.

### Standard scope of delivery

1 x TFT monitor

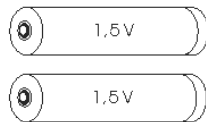


### Standard accessories in accessory box

1 x remote control



2x batteries LR03



1 x mains cable, 2.5 m long

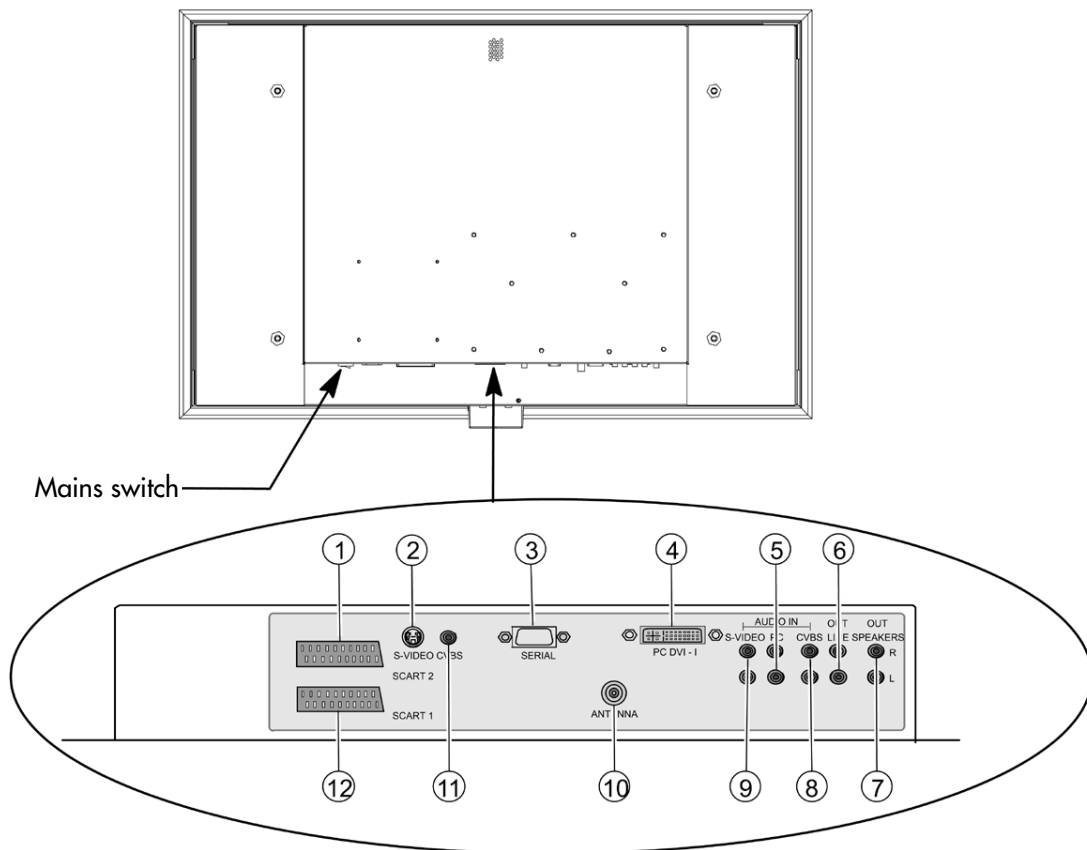


1 x video cable, HD-Sub to DVI-I, 2.0 m long



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## 3.2 Connections



- ① SCART 2 – e.g. for connection of a video recorder
- ② S-VIDEO (Y/C) – e.g. for connection of a camcorder with S-Video connector
- ③ SERIAL - RS232 interface for service purposes
- ④ PC DVI-I - PC input connector (RGB for analogue signals, DVI for digital signals).  
If your PC has an analogue VGA output, use the enclosed video cable DVI-I to 15-pin HD-Sub for connecting it to the monitor.
- ⑤ AUDIO IN PC – e.g. for connection of an audio signal from a PC with line-out connector
- ⑥ OUT LINE – e.g. for connection of an audio amplifier or a DVD receiver
- ⑦ OUT SPEAKERS – sockets for external loudspeakers  
(The loudspeaker output provides a power of 2 x 7W sinusoidal into 4Ω.)
- ⑧ AUDIO IN CVBS – e.g. for connection of a camcorder to the Video-In socket
- ⑨ AUDIO IN S-VIDEO - e.g. for connection of a camcorder to the S-Video socket
- ⑩ ANTENNA – socket for the TV antenna signal (terrestrial antenna or cable outlet)
- ⑪ CVBS - e.g. for connection of a camcorder to the Video In socket
- ⑫ SCART 1 - e.g. for connection of a satellite receiver



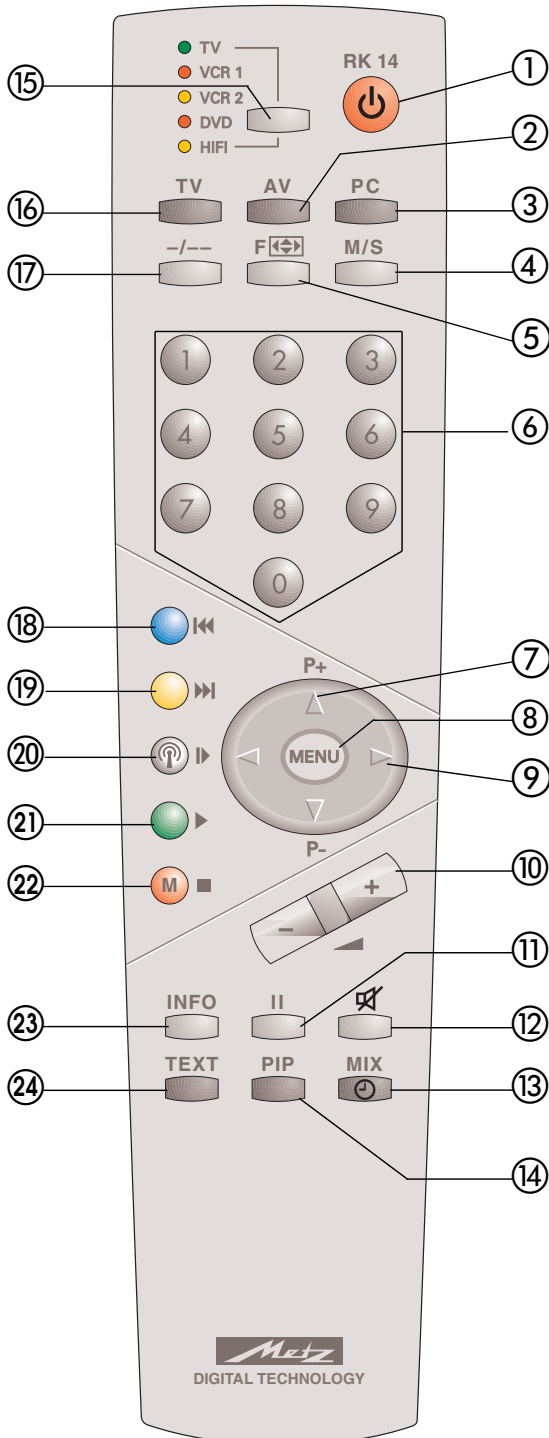
## 3.3 Keys and Functions of the Remote Control

Before you can control your TFT monitor with the remote control, you must plug it into a mains socket and switch it on with the mains switch.

The infrared remote control will operate correctly only if there are no physical obstacles between it and the infrared sensor located at the bottom of the front side of the monitor. The maximum range of the remote control is about 7 metres.

It may happen that the monitor cannot receive the signals from the remote control, or that the range of functions is greatly restricted, although there are no obstacles in the way. In such cases, please reduce the distance between the monitor and the remote control.

As the batteries become weaker, the range of the remote control will be reduced. In such cases, fit new batteries in the remote control. Use only dry batteries of the type LR03 AAA 1.5 V.



- ① OFF (standby)
- ② Direct selection, video mode
- ③ Direct selection, PC mode
- ④ MONO/STEREO changeover
- ⑤ Aspect-ratio switching
- ⑥ Numeric keys 1 -9, 0
- ⑦ P+ / P- programme step
- ⑧ Open TV menu
- ⑨ Volume adjustment, Cursor left/right key
- ⑩ Volume adjustment
- ⑪ TV: freeze frame; TT: page hold
- ⑫ Mute
- ⑬ TV: display time
- ⑭ PIP (picture in picture, PC mode only)
- ⑮ SELECT: selection key for external AV devices
- ⑯ TV mode (back to TV picture from, for example, DVD, PC, etc.)
- ⑰ Selection key for two-digit programme-position numbers
- ⑱ Teletext: next subject
- ⑲ Teletext: next chapter
- ⑳ Open station table
- ㉑ Teletext: 1 page forwards
- ㉒ Memory – save menu settings  
Teletext: 1 page back
- ㉓ Info key for display of station logo and sound mode
- ㉔ Open/close Teletext

## 3.3 Keys and Functions of the Remote Control

### Programming the remote control for the individual devices




Before you can control your AV devices with the remote control, you must enter a three-digit code number in each of the various operating levels of the remote control.

- TV (TV set)  
The TV control level is already programmed for this Metz TV set. No other code can be entered.
- VCR1 (video recorder 1)  
VCR 2 (video recorder 2)  
DVD player  
HiFi (amplifier, tuner, tape deck, etc.)  
The remote control must be programmed with the appropriate code numbers, as shown in the code list.

☞ **See the factory settings and the code list at the end of these operating instructions.**





### Programming the codes for VCR and DVD

☞ After execution of the steps a). . . c), you have about 15 seconds to enter the code. After this, the TV automatically returns to the TV level.

- Use the Select key  to select the desired operating level. The LED for the selected level lights.
- Press and hold the keys  und  on the remote control until the LED blinks twice.
- Enter the desired code (see the code list) with the numeric keys. If the code is accepted, the LED again blinks twice. If you have entered an invalid code, the LED lights once for about 2 seconds.




### Programming the codes for CD player, tuner and tape deck

☞ After execution of the steps a). . . c), you have about 15 seconds to enter the code. After this, the TV automatically returns to the TV level.

- Use the Select key  to select the desired operating level. The LED for the selected level lights.
- Press and release the  key and then press and hold the key:
  -  for a CD player
  -  for a tuner (radio)
  - M/S** for a tape deck (cassette player)until the LED blinks twice.
- Enter the desired code (see the code list) with the numeric keys. If the code is accepted, the LED again blinks twice. If you have entered an invalid code, the LED lights once for about 2 seconds.

### Programming the code for a HiFi amplifier

☞ After execution of the steps a). . . c), you have about 15 seconds to enter the code. After this, the TV automatically returns to the TV level.

- Use the Select key  to select the HiFi operating level. The HiFi LED lights.
- Press and release the  key and then press and hold the **M/S** key until the LED blinks twice.
- Press the  key. The LED blinks once.
- Enter the desired code (see the code list) with the numeric keys. If the code is accepted, the LED again blinks twice. If you have entered an invalid code, the LED lights once for about 2 seconds.

### Searching for the code

Proceed as described above for VCR, DVD, CD, tuner, tape deck up to the point where the code number is to be entered. Now enter "001" as the code for the search operation. The LED then blinks twice as an acknowledgement of the input. Press and hold the Search key (which depends on the operating level; see the table) until the search stops or the TV is switched off (a STOP or OFF command is automatically generated every 1.5 seconds).

Release the Search key and press the Select key  to confirm the selection (the code which was found is saved).

After completion of the search, or after all code numbers have been interrogated, the related LED blinks five times.

## Determining which codes are already programmed (read-out mode)

☞ After execution of the steps a). . . c), you have about 15 seconds to enter the code. After this, the TV automatically returns to the TV level.

- a) To determine which code is programmed for an operating level, first execute steps 1.1 a) to b).
- b) Then enter the code 002 with the numeric keys. The LED blinks twice to acknowledge the input.
- c) Press numeric key 1 to display the first digit of the code. The LED blinks to display the digit (example: LED blinks three times – the digit 3 is programmed).
- d) Press numeric key 2 to display the second digit of the code. The LED blinks to display the digit (example: LED does not blink – the digit 0 is programmed).
- e) Press numeric key 3 to display the third digit of the code. The LED blinks to display the digit (example: LED blinks seven times – the digit 7 is programmed).

The code previously programmed for this level is thus 3 0 7.

If you lose count of how many times the LED blinks, start again at step 2c).

Key	VCR 1 / 2	DVD	HiFi		
			CD (F1)	TUNER (F2)	TAPE (F3)
① Off	Stand-by	Stand-by	ON: Display Time/Track ON & AV, EIN:on/standby	ON: Radiotext on/off ON & AV, Ein: on/standby	
② AV	AV - input	Repeat	AUX input	AUX input	AUX input
③ PC	Record	Return			
④ M/S		Subtitle	F3 & ON: tape input	F3 & ON: tape input	
⑤ F(↔)		Audio	F2 & ON: Tuner		F2 & ON: Tuner
⑥ 0...9	Num. keys: select programme	Numeric keys: select title	Num. keys: select title	Num. keys: select progr.	
⑦ P +/-	Programme +/-	Cursor up/down	Titel +/-	Programme +/-	
⑧ Menu	Menu	Menu / Enter			
⑨ < >	Fast forward / rewind	Cursor left/right		Frequenz +/-	
⑩ Vol.+/-	Volume +/- TV	Volume +/- TV	Volume +/- AMP	Volume +/- AMP	Volume +/- AMP
⑪	Pause	Pause	PAUSE		
⑫ Mute	Mute TV	Mute TV			
⑭ PIP	Switching voltage on/off	Title			
⑮ Select	Select operating level	Select operating level	Select operating level	Select operating level	Select operating level
⑯ TV					
⑰ --/-	Time in display	Angle		F1 & ON: CD	F1 & ON: CD
⑱ Blue		Skip -			
⑲ Yellow		Skip +			
⑳ White	Slow-motion	EJECT			
㉑ Green	PLAY	PLAY	PLAY		
㉒ Red	STOP / Search	STOP / Search	STOP / OPEN-CLOSE / Search	Numeric key ② =Search	Search
㉓ Info	INFO, TV set*	INFO, TV set*	INFO, TV set*	INFO, TV set*	INFO, TV set*
㉔ Text		Display			

\*) Available soon: when the TV set is on, hints for the selected operating level are displayed.

### Note:

The assignments of the remote control keys to the device functions are valid only for the AV devices programmed in the factory. If other AV devices are used and programmed as shown in the table, the assignments may differ and/or restrictions may apply.

### Search:

Execute the programming procedure for VCR, DVD, CD, tuner, tape deck up to the point where the code number is to be entered. Then enter the code number "001" for the search function. The LED blinks twice. Press and hold the Search key (depends

on the operating level, see table) until the TV stops or switches off (an OFF or STOP command is automatically generated every 1.5 seconds).

Release the Search key and press the Select to confirm the selection, The selected code is saved.

### Reset:

Execute the programming procedure for VCR, DVD, CD, tuner, tape deck up to the point where the code number is to be entered. Then enter the code number "000" for the reset function. The LED blinks twice. All codes have now been reset to the factory settings.

The reset is executed simultaneously for all operating levels, regardless of the level from which the operation is executed.

## 4. Putting into Service



Switch off all devices, including the TFT monitor, before making any connections between them.

### 4.1 Unpacking and Positioning

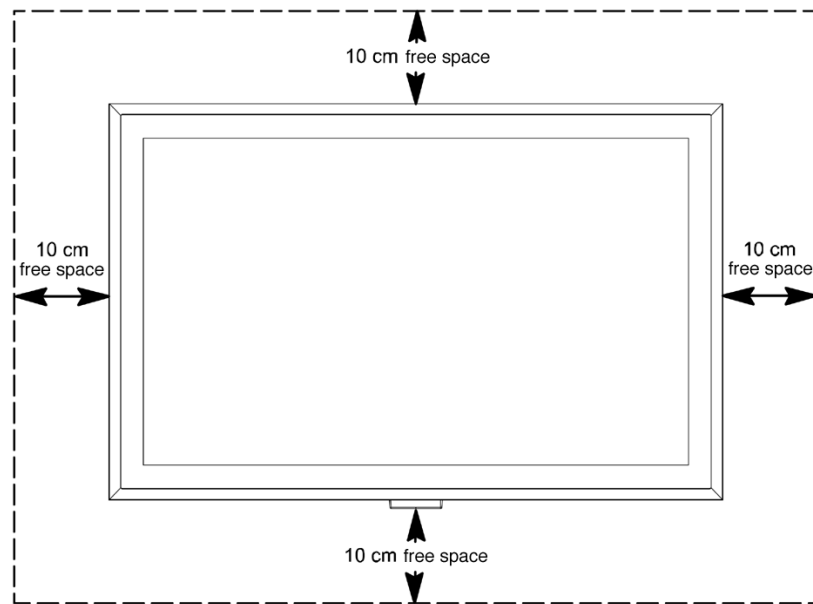
#### Selecting the installation position

Viewing direction

- Although the TFT monitor has a very wide viewing angle, the picture will be best if you view it directly from the front. You should therefore adjust the position of the monitor to match the most frequently used viewing direction.

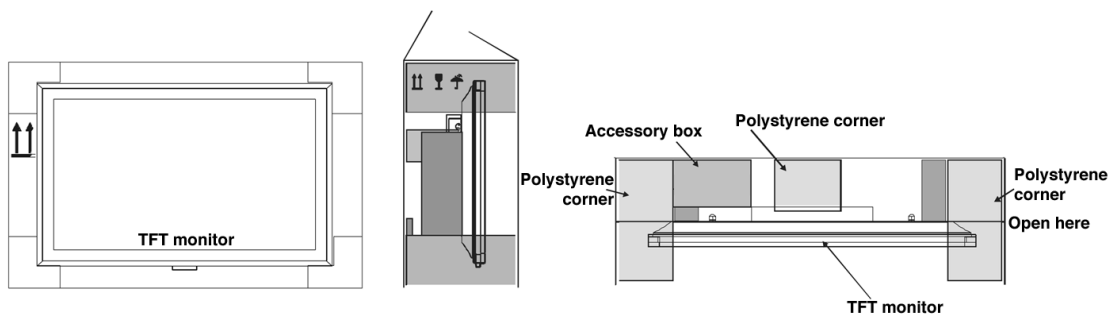
Position

- Reflected light  
Avoid positioning the monitor directly opposite windows or other light sources
- Access to the mains input  
The mains input and the mains switch should be easily accessible at all times.
- Ventilation  
Ensure that there is a space of at least 10 cm, above and below the ventilation openings, between the monitor and any other pieces of furniture, walls, etc.
- Ambient temperature  
For safe and reliable operation, the ambient temperature must lie between 5°C and 35°C.



#### Unpacking

- ☞ Place the cardboard box upright on a firm surface. The arrows on the ends of the box point to the top of the box.



- ✎ Remove the adhesive tape from the top of the box and fold the top flaps of the box outwards.
- ✎ Remove the two polystyrene corner blocks and remove the accessory box. The accessory box is located at one end, on the rear side of the monitor.

**!** Before removing the monitor from its box, assemble the table-foot<sup>1)</sup>, the wall bracket<sup>1)</sup> or the glass console<sup>1)</sup> and place it in the intended installation position.

**!** Never attempt to lift the monitor on your own, since this can cause injuries. Always obtain assistance from a second person when removing the monitor from its box.

- ✎ Never stand the monitor directly on its base, since the infrared sensor is mounted there and will be damaged.

## 4.2 Wall Mounting (possible only with the wall bracket <sup>1)</sup>)

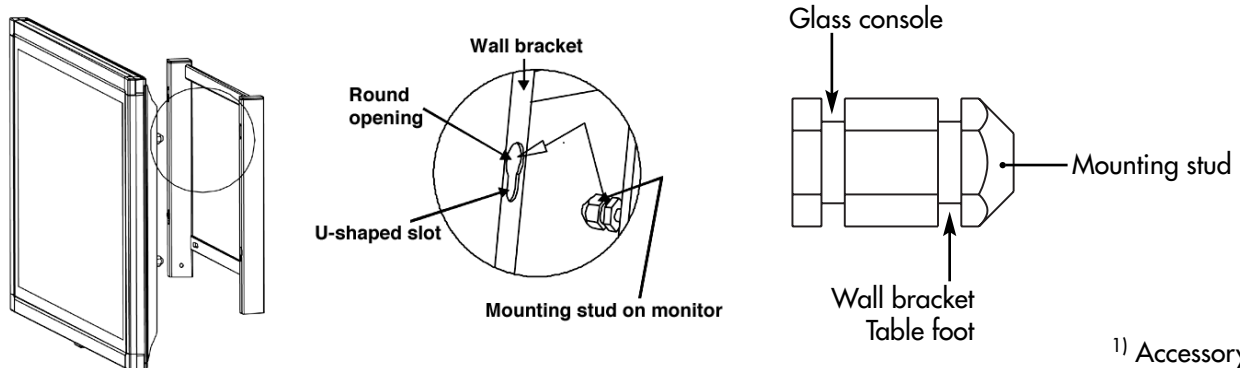
**!** Non-compliance with the following instructions can result in serious injuries to persons and/or irreparable damage to the monitor.

**!** The TFT monitor may be mounted only on a vertical wall, using the wall bracket<sup>1)</sup>. Always obtain assistance from a second person when installing the wall bracket and placing the monitor on it.

- Take great care when installing the wall bracket, since it must not only support the weight of the monitor but also withstand vibrations, shocks, etc.
- Before installing the wall bracket, check the thickness and stability of the wall. Purchase suitable metal screws and wall plugs from a DIY shop. We recommend using screws with a diameter of 8 mm.
- The wall must be solid (made of normal bricks, lime sand bricks or concrete) and capable of supporting the weight of the monitor.
- For walls made of other materials, such as wood, and for hollow walls, have the wall bracket installed by an experienced handyman.

### Wall mounting with the wall bracket <sup>1)</sup>

- The wall bracket<sup>1)</sup> consists of two vertical metal strips, connected together by horizontal strips, and provides the connection between the monitor and the wall.
  - A drilling template can be found in the accessory box. Use this template to drill the necessary holes and secure the wall bracket to the wall. The manufacturer recommends using screws with a diameter of 8mm.
  - Note that the monitor will sink by about 19 mm, compared with the position of the bracket, when it is mounted on the bracket.
  - After installing the bracket, check that it is securely mounted.
  - After the bracket<sup>1)</sup> has been installed, you can hang the TFT monitor on it.
- ✎ There are four mounting studs on the back of the monitor. Insert all four studs into the large round openings in the wall bracket and lower it so that the studs slide into the U-shaped slots.



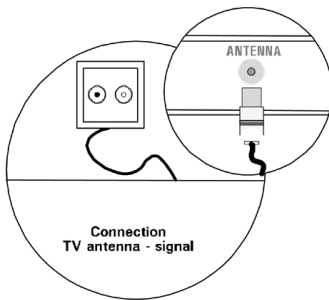
<sup>1)</sup> Accessory

## 4.3 Connecting and Switching On

**Connecting** (see the picture on page 8 for an overview of the connections)

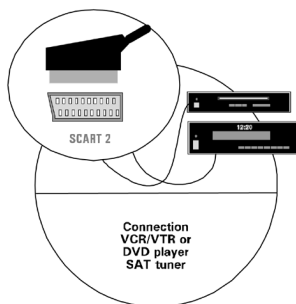
✎ Insert the mains cable into the input socket on the monitor and plug the other end into an outlet socket.

### • Cable outlet or terrestrial antenna



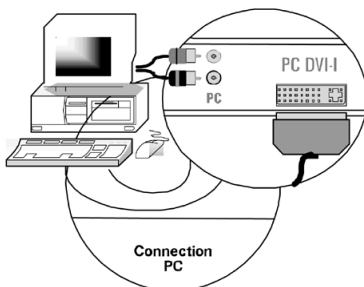
If you have a cable outlet or a terrestrial antenna, connect it to the socket ANTENNA.

### • Satellite receiver



If you have a satellite receiver, use a SCART cable to connect it to the socket SCART 1 or SCART 2.

### • PC



To connect your PC to the TFT monitor, use the PC DVI-I socket. If your PC has an analogue VGA output, use the enclosed cable (DVI-I to 15-pin HD-Sub) to connect it to the monitor.



On some older PC graphic cards, pin 9 of the connector may be blanked off. If this is the case, please contact your local dealer.

## Preparation

### • Remote control

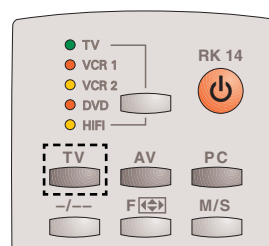
✎ Open the battery compartment on the back of the remote control and insert the two batteries supplied with the monitor (type LR03 Micro AAA). Observe the battery polarity shown on the bottom of the battery compartment. Close the battery compartment again.

## Switching on

✎ Set the mains switch on the back of the monitor to the position "I". The monitor is now in standby mode and can be switched on with the remote control.

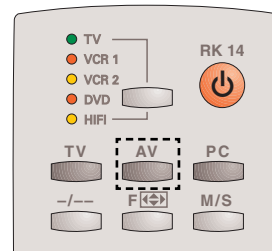
### • Cable outlet or terrestrial antenna

✎ Switch on the monitor by pressing the TV key or one of the numeric keys on the remote control.



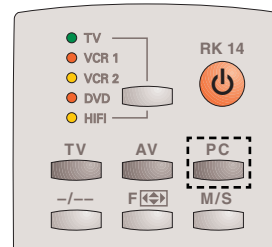
- Satellite receiver

☞ Switch on your satellite receiver and press the **AV** key on the remote control to switch on the monitor. Note that you may have to press the **AV** key several times, depending on the SCART socket to which your receiver is connected.



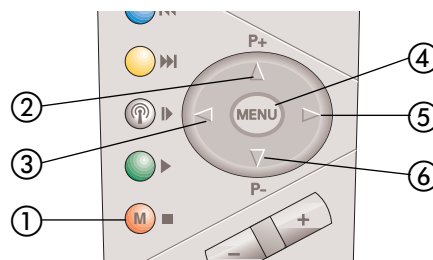
- PC

☞ Switch on the monitor by pressing the **PC** key on the remote control and then select the appropriate signal input ( PC(RGB) or PC(DVI)). To do this, press the **MENU** key on the remote control to open the TV menu of the monitor and select the desired input signal in the sub-menu INPUTS > SOURCE.



## 4.4 Using the TV Menu

You can set up and operate your TFT monitor with the aid of the simple menu control system. This is done with six keys on the remote control:



- ① **M** key  
Saves any changes you have made.
- ② **P ▲** - key  
Moves upwards in the TV menu. The selected sub-menu or function is marked with a different coloured background. If functions are displayed as values or bars, you can increase the value with this key.
- ③ **P ◀** - key  
Back to the previous menu. Exit from the currently selected sub-menu or function.
- ④ **MENU** - key  
Opens the TV menu. The main menu is displayed at the top left corner of the screen. Pressing the MENU key again closes the TV menu.
- ⑤ **P ▶** - key  
Activates the selected sub-menu or function. The selected menu item is displayed on a green background and can be changed.
- ⑥ **P ▼** - key  
Moves downwards in the TV menu. The selected sub-menu or function is marked with a different coloured background. If functions are displayed as values or bars, you can decrease the value with this key.

### Saving changes

Any changes you have made in the TV menu are saved by pressing the **M** key on the remote control (see picture above) or by closing the TV menu.

## 4.5 Basic TV-Menu Settings

### Menu language

Your monitor can display the TV menu in any of six languages (German, English, French, Italian, Dutch or Spanish). To change the preset language, open the main menu and select the menu item SETUP. In the sub-menu, activate the menu item LANGUAGE and select the desired language:

Inputs	>		
Picture	>		
Display	>		
Sound	>		
Set Up	>	Display Source Info:	On
Info	>	Language:	English
		OSD Set Up:	>
		Pwr Down/Stand-By:	>
		Reset to factory Defaults:	>
		Sleep Timer:	Off

### Changing the menu properties

To change the display of the TV menu or the time it remains displayed if you make no further entries, open the main menu and select the menu item SETUP.

Inputs	>		
Picture	>		
Display	>		
Sound	>		
Set Up	>	Display Source Info:	On
Info	>	Language:	English
		OSD Set Up:	>
		Pwr Down/Stand-By:	>
		Reset to factory Defaults:	>
		Sleep Timer:	Off
		Time Out:	5 s
		Transparency:	Off

#### Info signal source:

On: an information window is displayed whenever you change the signal source.

Off: no information is displayed.

#### OSD settings:

Wait time: 5, 10, 15 seconds or Off (close with MENU key).

Transparent: OSD semi-transparent (On) or not transparent (Off)

#### ECO mode/standby

Logo display does not function on model 040TK81.

Sync-signal evaluation (for PC input only)

Options: the monitor does not switch itself off automatically (Off) or switches automatically after a few minutes to standby mode (On).

### Resetting to the factory settings

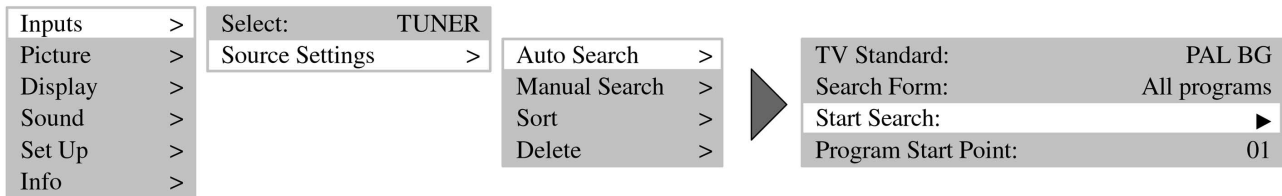
If desired, you can reset all changes you have made in the TV menu to the original factory settings. To do this, open the main menu and select SETUP. In this sub-menu, activate the menu item USE FACTORY SETTINGS.

Inputs	>		
Picture	>		
Display	>		
Sound	>		
Set Up	>	Display Source Info:	On
Info	>	Language:	English
		OSD Set Up:	>
		Pwr Down/Stand-By:	>
		Reset to factory Defaults:	>
		Sleep Timer:	Off



## 4.6 First-Time Settings


### Automatic station search



- Press the **TV** key (16) to switch on the monitor.
- Press the **MENU** key (8) to open the TV menu.
- Use the cursor key ▶ to move to the sub-menu "Inputs".
- Use the cursor key ▼ to select "Setup".
- Use the cursor key ▶ to move to the sub-menu "Settings".
- Use the cursor key ▶ to move to the sub-menu "Auto. Search".
- Use the cursor key ▶ to move to the settings for the "Auto. Search".
- Set the TV standard, if necessary, by using the cursor keys ▶ and ▼ to select the desired standard and pressing the cursor key ◀ to accept it.
- Set the search mode:
  - a. All stations: the search places all receivable stations in the station table and sorts them.
  - b. New stations: the search adds all stations which are not yet in the station table and sorts them.Use the cursor key ▼ to move to "Search mode" and press the ▶ key to activate it. Then use the cursor key ▼ to select the desired search mode and press the cursor key ◀ to accept it.
- Define the starting position: use the cursor key ▼ to select "First programme position" and activate it with the ▶ key. Then enter the desired first programme position with the numeric keys 0-9.
- Start the search: use the cursor key ▼ to select "Start search" and press the cursor key ▶ to start the search.
- The tuner now searches for stations, places them in the station table and sorts them. The search can be stopped at any time by pressing the red key.
- After completion of the search, the monitor is set to programme position 1 and the station table is closed.
- You can open the station table with the white key.



## 4.6 First-Time Settings

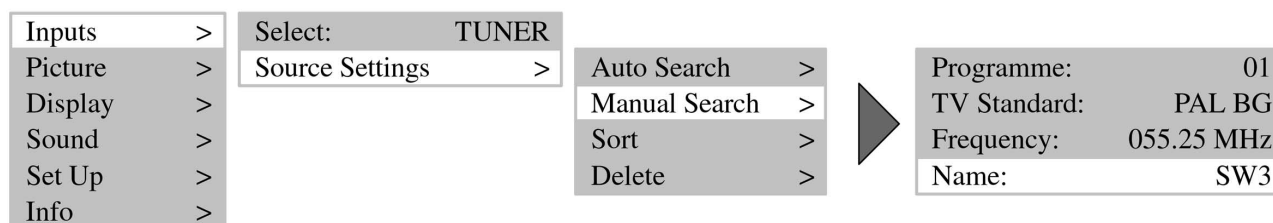
9. Deleting a single station: select the station to be deleted with the cursor key and press the **red** key to delete it.
10. Deleting several contiguous stations: select the first station you want to delete and press the green key. Then select the last station you want to delete and press the **yellow** key.  
Press the **blue** key to delete the entire block of stations.
11. When you are finished, press the **MENU** key  to exit from the "Delete stations" window.

### Changing the station names

If your TFT monitor can determine the station name from the TV signal, this name is saved at the selected programme position. If the station name cannot be determined, the number of the programme position is saved in the programme position (e.g. PR02).

To change the saved station names, proceed as follows:

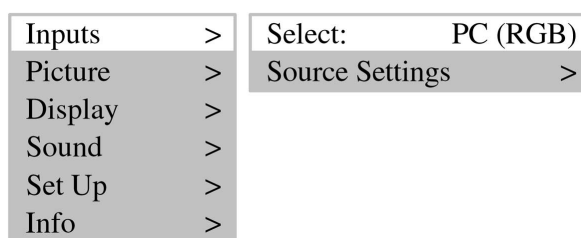
- Use the cursor key **▼** or **▲** to select the menu item "Name".
- Press the cursor key **▶** to select the first character of the name.
- Use the cursor keys **▼** or **▲** to scroll through the character set until the desired character appears at the selected character position.
- Press the cursor key **▶** to move to the next character of the name.
- Repeat the above three steps until you have entered the desired name.  
Note that the name may not be longer than **five** characters.



### PC mode

#### Selecting the signal input

- Press the **PC** key on the remote control to switch on your monitor.
- Press the **MENU** key on the remote control to open the TV menu.  
The menu item "INPUTS" is coloured.
- In the sub-menu "SOURCE", select the appropriate signal input [PC (RGB) or PC (DVI)].



## 4.6 First-Time Settings

### Auto-adjust function

The first time an analogue video format (RGB) is used, the TFT monitor automatically executes the auto-adjust function. While this is running, the display on the screen moves back and forth slightly in order to determine the optimum position and display format.



**For some PC formats, the H/V (horizontal/vertical) position and the picture size have to be adjusted manually. The auto-adjust function depends to a great degree on the picture being displayed. The best results will be obtained with a full-screen display of a plain white picture.**

Inputs	>	Select: PC (RGB)	H freq.:	60.0 kHz
Picture	>	Source Settings >	V freq.:	75.0 Hz
Display	>		Pixel Clk:	78.75 MHz
Sound	>		H / V Pol:	+ / -
Set Up	>		User timings	>
Info	>		Auto Setup	▶
			V Pos:	<input type="text"/>
			V Size:	<input type="text"/>
			H Size:	<input type="text"/>
			H Pos:	<input type="text"/>
			Phase	<input type="text"/>

You can save frequently used formats as so-called user formats. The monitor recognises such saved formats and immediately uses them automatically without executing the auto-adjust function. To do this, proceed as follows.

- In the main menu, select the menu item "INPUTS" and then open the sub-menu "SETTINGS".
- Activate the menu item "User formats".
- Use the menu item "CALL" to determine the currently selected user format. Now you can save this user format in one of the eight available positions by executing the menu item "SAVE".

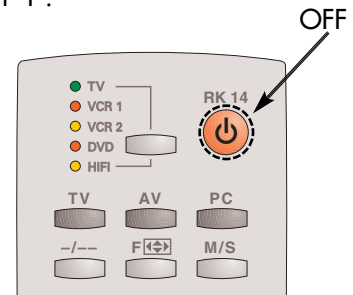
Inputs	>	Select: PC (RGB)	H freq.:	60.0 kHz	
Picture	>	Source Settings >	V freq.:	75.0 Hz	
Display	>		Pixel Clk:	78.75 MHz	
Sound	>		H / V Pol:	+ / -	
Set Up	>		User timings	>	Position: 1
Info	>		Auto Setup	▶	Recall ▶
			V Pos:	<input type="text"/>	Save ▶
			V Size:	<input type="text"/>	Delete All ▶
			H Size:	<input type="text"/>	
			H Pos:	<input type="text"/>	
			Phase	<input type="text"/>	

## 5. Day-to-Day Operation

### 5.1 Switching On and Off

#### Switching on

- Turn on the power for the TFT monitor by setting the mains switch to the position "I".
- The standby LED on the infrared sensor lights (red).
- Press any of the numeric keys or the "TV" key on the remote control to switch the monitor to TV mode.
- The ready LED on the infrared sensor lights (blue).



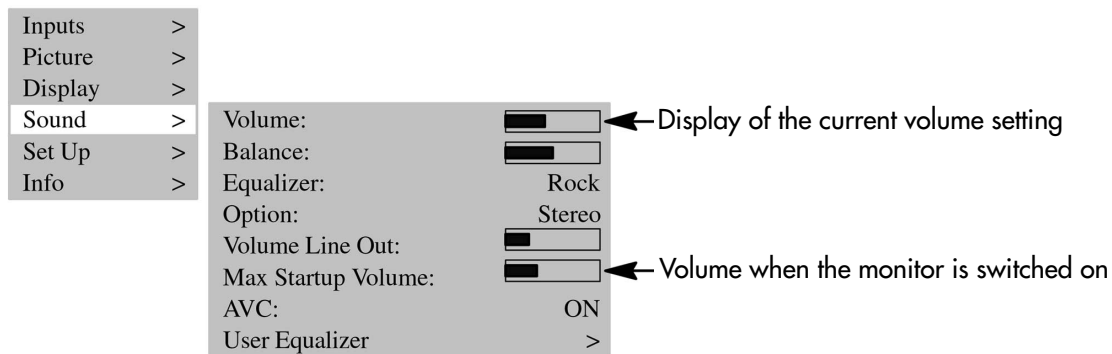
#### Switching off

- Press the **OFF** key on the remote control to switch the monitor back to standby mode.
- The standby LED on the infrared sensor lights (red).
- To completely switch off the TFT monitor, set the mains switch to the position "0".

### 5.2 Adjusting the Sound

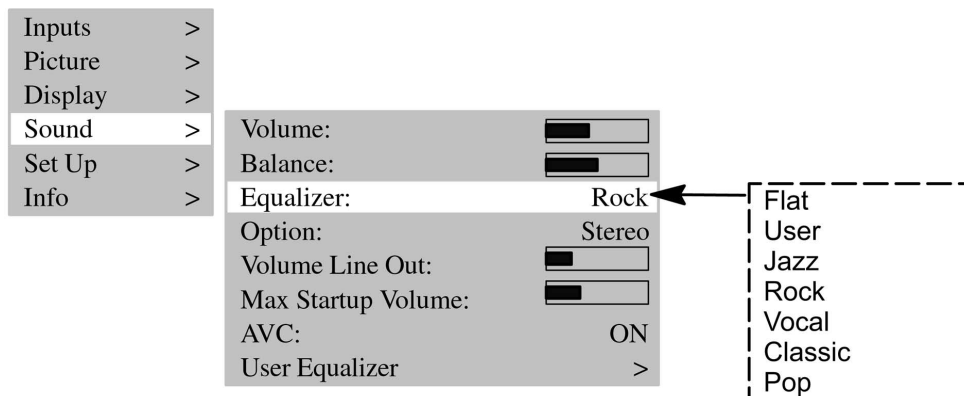
#### Adjusting the volume

- Press the - (Vol -) or + (Vol +) key  on the remote control to set the volume to the desired level.

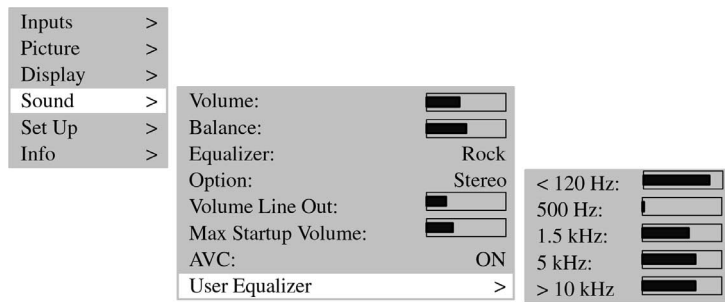


#### Sound settings

With the menu item "EQUALIZER", you can select predefined sound settings.



To make your own individual settings, select the option "USER".



## Mute function

- Press the key on the remote control. The sound is muted and the following info window is displayed on the screen for about three seconds:

TUNER: 2 ZDF  
MUTE

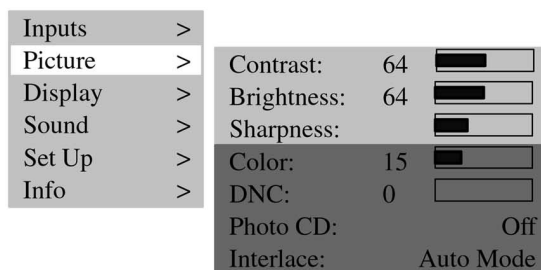
- To switch the sound on again, press the key again or press the - (Vol -) or + (Vol +) key on the remote control. The following info window is displayed on the screen for about three seconds:

TUNER: 2 ZDF  
STEREO

## 5.3 Adjusting the Picture

You can adjust the contrast, brightness, sharpness and colour of the picture to any desired values.

- Press the key to increase the value or the key to decrease it.
- The setting "SHARPNESS" permits you to adjust the sharpness of the picture.
- The menu item "COLOUR" (not available in PC mode) permits you to change the colour intensity:



← These menu options are not available with the settings INPUTS SELECT "PC(RGB)" and "PC(DVI)"!

**Hue** (available only for an RGB input signal via Scart1)

If you wish to change the hue of the picture delivered via the AV programme position "Scart1", select the menu item "Hue". Pressing the cursor key will make the picture greener, and pressing the cursor key will make it redder. In this case, the colour control has no effect.

**DNC** (Digital Noise Control)

In the case of a very noisy signal, the background noise can be reduced with the DNC function.

**Photo CD** (not available in PC mode)

The appearance of still pictures such as JPEG photos from a DVD player can be optimised by setting "Photo CD" to ON.

**Interlace**

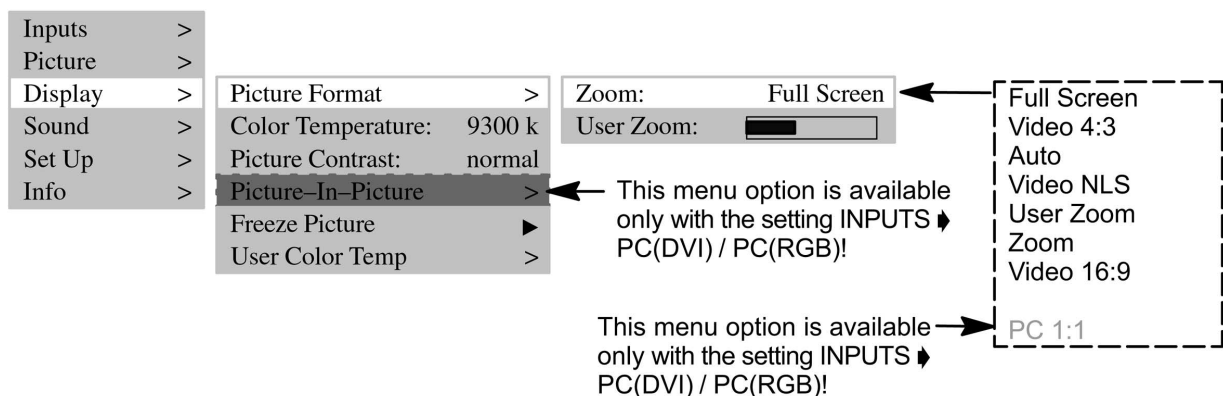
When using signal sources which generate non-interlaced signals, better results may be obtained by setting this function to OFF.

## Aspect ratio

You can use the menu item DISPLAY > FORMAT > ZOOM to select one of several pre-defined aspect ratios.

The menu item USER ZOOM permits you to define your own user aspect ratio. To activate this setting, select the menu item ZOOM and then USER ZOOM.

- Fullscreen  
If this setting is selected, the width and height of the picture are adjusted so that the picture always fills the entire screen.
- Video 4:3  
This setting displays a PAL 4:3 picture with the correct aspect ratio. Dark bars are visible at the left and right edges of the screen.
- Auto  
Wide-screen pictures are automatically displayed so that they fill the screen.
- Video NLS (Non Linear Scaling)  
With this setting selected, the width and height of the picture are automatically adjusted to fill the entire screen, but the expansion is not linear. In other words, the centre part of the picture is displayed correctly but the outer parts are expanded to an increasing degree towards the edges of the screen.
- User zoom  
With this setting, you can define your own aspect ratio within the range of 40% to 140 % of the original picture size.
- Zoom  
Switching manually from the aspect ratio Video 4:3 to zoom expands the picture vertically and horizontally by about 20% more than the fullscreen display. This reduces the dark bars which appear at the top and bottom edges of the screen when watching a widescreen film transmitted in the aspect ratio 4:3.
- Video 16:9  
This setting displays a PAL 4:3 picture so that no dark bars are visible at the left and right edges of the screen.



☞ You can switch between the various aspect ratios by repeatedly pressing the **F(↔)** key on the remote control.

## 5.4 TV Mode

The TFT monitor is in standby mode.

- To switch it on, press the **TV** key on the remote control.
- The station (programme position) you were watching when the monitor was last switched off now appears on the screen and the following info window is displayed for about 3 seconds:

TUNER: 2 ZDF  
STEREO

- Press the **P▲** or **P▼** key ⑦ to step to the next or previous programme position, respectively.
- You can also select a programme position directly with the numeric keys (or with the preselection key and the numeric keys for two-digit programme position numbers).

## Teletext

There are three types of Teletext information which can be received with the TFT monitor: FLOF (Fasttext), TOP-Text and Level 1.5.

- Select a station which transmits Teletext.
- Press the **TEXT** key on the remote control to display the Teletext information.
- Use the numeric keys for direct selection of the desired Teletext pages.
- Depending on the type of Teletext being received, the red, green, yellow and blue keys have different functions. These functions are shown at the bottom of the Teletext window.
- To close the Teletext window, press the **TEXT** key on the remote control again.

## Displaying Teletext subpages

Subpages are the individual pages of a multiple Teletext page.

- Select the desired Teletext page (e.g. ARD Teletext, Page 743).
- Press the **-/--** key (17).
- Enter a four-digit number (e.g. 0004) to select the desired subpage.
- If the desired subpage is not displayed within a short period, press the **MENU** key to return to the TV programme.
- When the desired subpage has been found, its number is displayed at the top left corner of the screen.
- To display the selected page, press the **MENU** key again.

## 5.5 PC Mode

- Ensure that the TFT monitor and the PC are both switched off.
- Connect your PC to the TFT monitor with the enclosed video cable, inserting the DVI plug into the monitor and the HD-Sub plug into the PC.
- Switch on the TFT monitor and the PC.
- In the menu item "INPUTS-> SOURCE", you can select the appropriate input signal from the PC:
  - a) analogue RGB-Signal: select PC(RGB)
  - b) digital DVI signal: select PC(DVI)

When the TFT monitor is switched on, it automatically detects the picture format which is set on the PC. This information is shown in an Info window.

RGB-1024 x 768  
Fullscreen



## 5.6 Operation with External Devices

### Video recorder

- Ensure that the TFT monitor and the video recorder are both switched off.

There are three ways of connecting a video recorder to the TFT monitor:

- via the antenna input (see the operating instructions for your video recorder);
  - with a SCART cable connected to input SCART1 or SCART2;
  - via the Y/C input if your video recorder has an S-Video output.
- Switch on the TFT monitor and the video recorder.
  - To switch to the input where your video recorder is connected (such as SCART1), press the **AV** key several times.

SCART 1  
Fullscreen

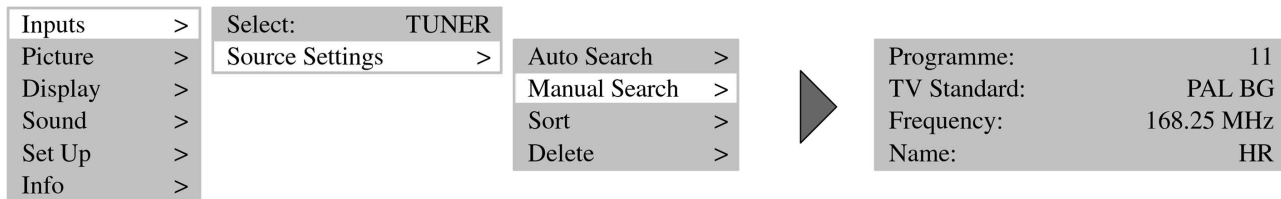
### DVD player

- Ensure that the TFT monitor and the DVD player are both switched off.
- Connect your DVD player to the SCART1 socket or, if the player has an S-Video output, to the Y/C input.
- Switch on the TFT monitor and the DVD player.
- To switch to the input where your DVD player is connected, press the **AV** key several times.

SCART 1  
Fullscreen

## 5.7 Special Functions

### Manual station search

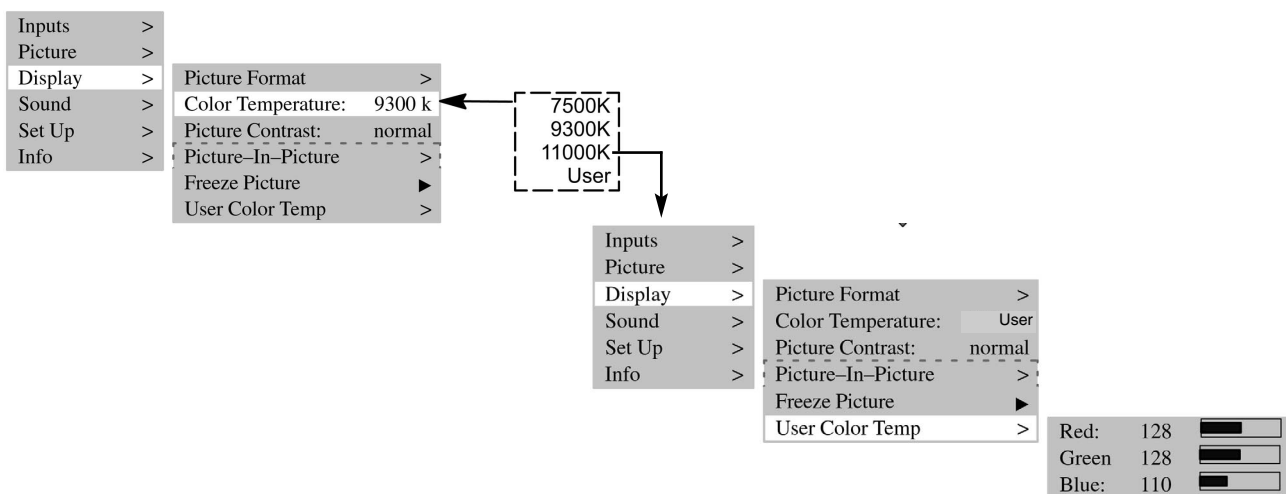


1. Press the **TV** key to switch on the monitor and press the **MENU** key.
2. Use the cursor key **▶** to open the sub-menu "Inputs".
3. Use the cursor key **▼** to select the sub-menu "Settings" and press the **▶** key to open it.
4. Use the cursor key **▼** to select the sub-menu "Manual search" and press the **▶** key to open it.
5. Use the cursor key **▶** to open the settings for the "Manual search".
6. Select the programme position:  
Use the cursor key **▼** to select the desired programme position and press the **▶** key to activate it. Alternatively, enter the number of the desired programme position with the numeric keys.
7. Select the TV standard:  
If necessary, use the cursor keys **▶** and **▼** to select the TV standard and press the **◀** key to confirm your selection.
8. Frequency: Use the cursor key **▼** to select the frequency and press the **▶** key to activate it. Alternatively, enter the desired frequency with the numeric keys.
9. Name: You can enter a name for the programme position. To do this, use the cursor key **▼** to select "Name" and press the **▶** key to activate it. Use the **▼** key to select the desired character and press the **▶** key to move to the next position. When you are finished, press **◀▶** to accept the input.
10. Press the **MENU** key to exit from the manual search.
11. You can display the station table by pressing the white key on the remote control.

### Colour temperature

You can select one of three pre-defined colour temperatures or use the menu item COLOUR TEMPERATURE > USER to define your own value.

A lower colour-temperature value increases the red component of the picture and makes it look "warmer". Higher values increase the blue component of the picture and make it look "colder".



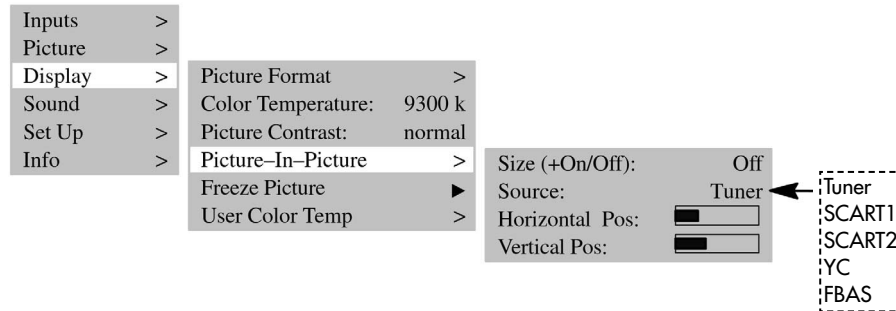
### Freeze frame

You can freeze on the current frame by pressing the **II** key or with the menu item FREEZE FRAME.

## Picture-in-picture

The picture-in-picture (PIP) function permits you to display a video picture in a small window while displaying signals from a PC.

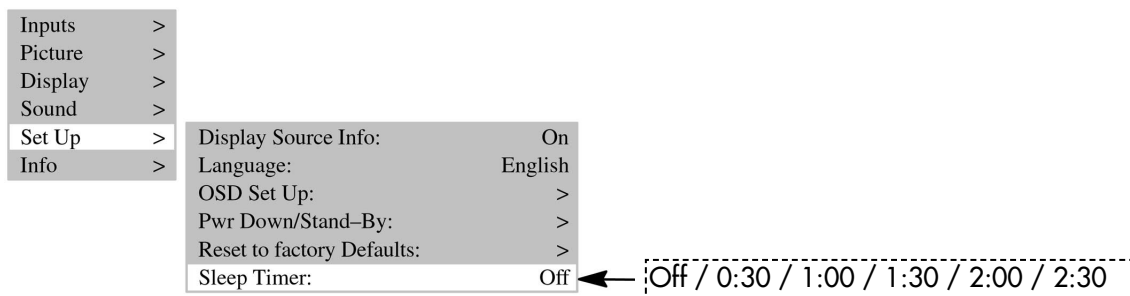
- The menu item "Picture-in-picture" can be found in the menu INPUTS > SOURCE > PC(DVI) / PC(RGB) and is used to select the source of the picture in the small window. The PIP key is used to activate the function.
- ☞ Press the **PIP** key to display the picture from the input selected under DISPLAY > PICTURE-IN-PICTURE > SOURCE (such as the tuner) in a window within the currently displayed picture.
- If there is no signal connected to the selected input, a dark window is displayed in the current picture.
- You can change the size and position of the window by repeatedly pressing the **PIP** key.



## Automatic power-off

You can set the TFT monitor so that it switches itself off after a certain time.

- ☞ Select one of the pre-defined times in the menu item POWER-OFF TIME.
- The TFT monitor will switch itself off automatically after this time.



## Switching between dual-language channels and between MONO and STEREO

Dual-language sound is the term for the method used to transmit films with a synchronised sound channel and the original sound channel. The viewers can then select which of these they want to hear.

When a dual-language programme is received, sound channel A is initially active.

- ☞ To switch to channel B, press the **M/S** key.

When receiving a MONO programme, you can switch from MONO to PSEUDO-STEREO.



When receiving a STEREO programme, you can switch from STEREO to STEREO WIDE.




## 6. Troubleshooting

If a problem occurs while you are using the TFT monitor, please read the following fault symptoms and try out the suggested remedies before sending the monitor in for repair. In some cases, you can rectify the fault easily.

If, for example, the mains cable of the monitor is not plugged into an outlet socket, or if there is some problem with the antenna, you might assume (incorrectly) that the monitor itself is faulty.



**If the following suggestions do not rectify the fault, switch off the monitor with its mains switch and disconnect the mains cable from the outlet socket. Never attempt to repair the monitor yourself. Under no circumstances should you remove the rear cover of the monitor.**

DEFECT	POSSIBLE CAUSE	POSSIBLE REMEDY
No picture and no sound, although the mains plug is inserted and the unit is switched on.	<ul style="list-style-type: none"> <li>• Mains switch in position "0" (OFF).</li> <li>• Mains plug of unit is not inserted into the socket.</li> <li>• Defective mains cable.</li> </ul>	<ul style="list-style-type: none"> <li>• Shift mains switch to position "I".</li> <li>• Insert the mains cable plug into the socket.</li> </ul>
Screen dark.	<ul style="list-style-type: none"> <li>• Contrast setting too low.</li> <li>• No input signal, wrong input selected.</li> </ul>	<ul style="list-style-type: none"> <li>• Set brightness and/or contrast correctly.</li> <li>• Check the connection cable; assign correct input to source.</li> </ul>
Weak or excessive colours.	<ul style="list-style-type: none"> <li>• Colour not correctly set.</li> <li>• Connection cable not correctly connected.</li> </ul>	<ul style="list-style-type: none"> <li>• Set the colour (under menu option PICTURE).</li> <li>• Connect the cable correctly.</li> </ul>
The picture is cut off or the picture is not centred.	<ul style="list-style-type: none"> <li>• Picture position not correctly set.</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the picture position.</li> </ul>
The picture is too large or too small.	<ul style="list-style-type: none"> <li>• Picture format set wrongly.</li> </ul>	<ul style="list-style-type: none"> <li>• Repeatedly press button <b>F</b> until picture is displayed as full screen.</li> </ul>
The remote control is not working.	<ul style="list-style-type: none"> <li>• The batteries are flat.</li> <li>• There is an obstruction between the remote control and the sensor.</li> <li>• The remote control is located outside of its operating range.</li> </ul>	<ul style="list-style-type: none"> <li>• Insert the new batteries.</li> <li>• Remove the obstruction between the remote control and the sensor.</li> <li>• Operate the remote control within the specified range.</li> </ul>
The displayed picture is too dark.	<ul style="list-style-type: none"> <li>• The picture quality is not set correctly.</li> </ul>	<ul style="list-style-type: none"> <li>• Correct the picture brightness and contrast.</li> </ul>
The picture is displayed, but there is no sound.	<ul style="list-style-type: none"> <li>• Volume off is switched on.</li> <li>• Set volume to minimum.</li> </ul>	<ul style="list-style-type: none"> <li>• Press the  button on the remote control.</li> <li>• Increase the volume.</li> </ul>
Individual letters are not displayed (PC mode).		<ul style="list-style-type: none"> <li>• Set the phase correctly.</li> <li>• Check the setting for the picture width.</li> <li>• Execute auto-adjust.</li> </ul>
Horizontal stripes with TV or video signals.	<ul style="list-style-type: none"> <li>• Signal source is set up before the display.</li> <li>• Screening of the video cable is insufficient.</li> </ul>	<ul style="list-style-type: none"> <li>• Always place the signal sources on the side of or behind the display.</li> <li>• Use only a high-grade signal cable with a high screening attenuation.</li> </ul>
<b>To put all settings back to basic status, use the menu option SETTINGS ↗ CALL DEFAULT SETTINGS!</b>		

### Temperature warning

If the TFT monitor gets too hot, a red warning window is displayed at the top left corner of the screen (see illustration on the left). If you do not provide the appropriate ventilation, the monitor may automatically switch to standby mode.

## 7. Technical Data

### SCREEN

Size (diagonal):	39.6" (100 cm), aspect ratio 15:9
Displayable picture size:	At least 862 mm (horizontal) x 517 mm (vertical)
Resolution:	1280 x 768 pixels
Colour display:	16.7 million colours simultaneously
Viewing angle:	170° (typical)
Contrast ratio:	600:1 (typical)
Noise output:	≤ 30 dBA

### VIDEO STANDARDS

TV / video:	PAL (BG, I, DK/K', M, L/L') / SECAM / NTSC
TV tuner:	PAL / SECAM, 47 - 861 MHz (VHF, UHF, hyperband)
PALplus, Cinescope:	Automatic aspect-ratio detection (fullscreen display)
Aspect ratios:	4:3, 16:9, Video NLS, fullscreen, zoom, user zoom (40% - 140%)

### FREQUENCY RANGE (PC)

Horizontal frequency:	30 - 80 kHz
Vertical frequency:	50 - 90 Hz
Clock frequency:	140 MHz (typical)
Typical resolutions:	VGA (640x480)    SVGA (800x600)    WVGA (848x480)    XGA (1024x768)
Frequency:	50Hz - 90Hz    50Hz - 90Hz    50Hz - 90Hz    50Hz - 90Hz
Typical resolutions:	WXGA (1280x768)    SXGA (1280x1024)    UXGA (1600x1200)
Frequency:	60Hz    50Hz - 75Hz    50Hz - 60Hz    and many more
Formats:	1:1, fullscreen, full-format, zoom, user zoom

### INPUTS / CONNECTORS / SYNCHRONISATION

PC/video input:	RGB analogue with automatic sync detection
Video connectors	TV Tuner:    IEC, 75 Ohm input impedance SCART1/2:    RGB(1), composite-colour input and output, audio input and output Composite colour FBAS:    RCA cinch Y/C:            MiniDIN (HOSIDEN)
PC connector, analogue/digital:	DVI-I
Audio connectors:	Stereo input:    3 x Cinch 1Vrms (FBAS, Y/C, PC), 2 x SCART 1 Vrms Stereo output:    2 x cinch, adjustable Stereo loudspeaker output: 2 x cinch, 7 W sin into 4 Ohms
Synchronisation:	Sync on green, composite sync with automatic detection, separate H and V sync
Controls:	Mains switch, local controls, IR remote control (6-language TV menu)

### OPERATING CONDITIONS

Temperature:	5°C - +35°C (operation), -20°C - +60°C (storage)
Relative humidity:	10% - 85% (no condensation)
Altitude:	max. 2,000 m (7,000 ft)

### SUPPLY VOLTAGE

Mains voltage:	230V AC
Mains frequency:	50/60 Hz
Power consumption:	250 W (5 W in standby mode)

### DIMENSIONS AND WEIGHT

H x W x D:	641mm x 972mm x 124mm
Weight:	25 kg

# Code list

## Codes Video

<b>M</b> etz VG61	532				
VF21, VF44, VF46					
VF61, VE21, VE43					
VE44, VE45, VD21					
VD43, VD44, VD45					
VC21, VC43, VC44					
VC62, 21VB11					
42VB12, 21VA12					
21VA13, 42VA11					
64VA14, 9836, 9837					
9847, 9874, 9875					
9876, 9877					
<b>M</b> etz VF22, VF47	568				
VF48, 9843, 9844					
9849					
<b>M</b> etz VH22, VH47	573				
VH48					
<b>A</b> CTION	468	481	547		
ADMIRAL	481	487			
ADVANTZ	481				
ADVENTURA	468	481	547		
ADYSON	487				
AGHA	547				
AIWA	481	505	562	572	477
AKAI	481	482	483	484	505
	508	546	554	575	609
	612				
AKIBA	487				
AKURA	487	505			
ALBA	466	588	593		
ALLORGAN	547				
ALLSTAR	529				
AMWAY	529				
ANITECH	487	490	529		
ART TECH	575				
ASA	478	481	528		
ASBERG	575				
ASTRA	481	547			
ASUKA	481	487			
ASUKA	527				
ASWO	528				
AUDIO DYNAMICS	505				
AUDIOSONIC	575	616			
AUDIOTON	466				
AUDIOVOX	481				
AVIS	487	547			
<b>B</b> AIRD	505				
BANG & OLUFSEN	503	583			
BASIC LINE	487				
BAUR	513	547	565	599	
	607	609	612		
BEAUMARK	547				
BELL & HOWELL	468				
BESTAR	466	616			
BLACK PANTHER	616				
BLAUPUNKT	491	496	502	507	508
	527	530	532	607	609
	610	612	614	621	
	466	487			
BONDSTEC	466				
BONDSTECBRANDT	505				
BRANDT ELECTRONIQUE	503	504	505	524	574
BRAUN	570				
BRIONVEGA	450	575			
BROKSONIC	481				
BRUNS	466	487	490		
BUSH	588	590	593		
<b>C</b> ALIN	481				
CALIX	481				
CANDLE	481				
CARRERA	547				
CARVER	527				
CGE	505				
CIE	487				
CIMLINE	487	481	487	547	
CLARIVOX	606				

## Codes Video

CLASSIC	481				
CLATRONIC	466				
COLORTYME	547				
COLT	487				
CONDOR	466	616			
CONTINENTAL EDISON	503	504	505		
CRAIG	481	487	547		
CROSLEY	481	507	527	547	
CROWN	487				
CROWN	490	575	616		
CRYSTAL	575				
CTC	466				
CURTIS MATHES	505	547			
CYBEREX	547				
<b>D</b> AEWOO	466	468	553	616	
DANSAI	487				
DAWA	575				
DAYTRON	466				
DE GRAAF	529				
DECCA	528				
DECCAVIDEO	528				
DENON	527				
DIGITAL	477	481	505		
DORIC	601				
DTS	547				
DUAL	503	504	505	527	
	530				
DUEL	505				
DUMONT	468	481	487	527	
DYNATECH	487				
<b>E</b> CONOMIC	510				
EDISON	487				
ELBE	616				
ELCATECH	487				
ELECTROHOME	481	547			
ELECTROPHONIC	481				
ELIN	547				
ELTA	487	616			
EMERSON	481				
EPC	505	586	598		
ESC	466	510	616		
ETZUKO	487				
EUROPHON	586				
EXPERT	604				
<b>F</b> ERGUSON	501	505	523	524	
	555	574	595	596	
FIDELITY	487				
FINLUX	468	477	478	528	
FIRST LINE	477	481	487	575	
FISHER	468	473			
FUNAI	481	487	571		
<b>G</b> AB	487				
GBC	466				
GE	547				
GEC	528	601	603	604	
GELOSO	466				
GITEM	575				
GOLDHAND	487	490			
GOLDSTAR	468	481	547	552	556
	575	610			
GOODMANS	466	487	530	616	617
	621				
GRAETZ	468	505	600	603	
GRANADA	468	474	477	532	542
	557	565	575	601	605
	606	616			
GRANDIN	481	487	604		
GRUNDIG	451	452	453	454	457
	458	459	460	461	462
	463	464	491	492	493
	495	496	497	507	527
	530	531	563	584	585
	600	606	609	610	611
	612	613			
GUTTRONIC	602				
<b>H</b> ANSEATIC	481	575			
HANTAREX	575				
HARLEY DAVIDSON	481				
HARVARD	481	487			
HCM	466	487	490		

# Code list

Codes Video				
HEADQUARTER	468			
HINARI	487	509		
HINARIHITACHI	475	476	477	478
HITACHI	481	485	503	505 530
	535	601	603	604
HYPSON	487			
IMPERIAL	510	575		
INGERSOL	509			
INNO HIT	510	547	575	
INNO HIT	616			
INTERBUY	481	487		
INTERDISCOUNT	575			
INTERFUNK	468	527	565	575 600
	601	603	604	
INTERVIDEO	466			
INTERVISION	487			
IRRADIO	481	487	575	606
ITT	450	468	483	505
ITV	466	481		
JENSEN	505			
JETPOINT	575			
JVC	503	504	505	519 520
	545			
JVC_LCD	515	521		
KAISER	575			
KAISUI	487			
KAPSCH	600	601	603	
KARCHER	575			
KENDO	483			
KENWOOD	468	505		
KLH	481	487		
KLIT	487			
KODAK	481			
KORPEL	487			
KUBA	473	504	505	510
LEYCO	487			
LG	578			
LIESENKOTTER	575	565		
LLOYD	481	487	547	
LLOYD'S	601	606		
LOEWE	481	491	575	
LOEWE OPTA	481	491	527	
LOGIK	487	509	547	
LUXOR	468	478	483	517 518
	601			
LXI	468	477	481	
MAGNADYNE	575			
M ELECTRONICS	547			
MAGNASONIC	470	481	487	547
MAGNAVOX	481	507	527	547
MAGNIN	481	547		
MAGNUM	581	582		
MANESTH	487			
MARANTZ	491	528	565	566
MARQUANT	487	490		
MARTA	481			
MATRIX	481			
MATSUI	486	509	560	561 562
	586	601	610	
MATSUSHITA	527			
MEDIATOR	527			
MEMOREX	468	481	547	
MEMPHIS	487			
MGA	547			
MGN	547			
MINERVA	606	609	610	612
MINOLTA	477			
MITSUBISHI	477	505	519	527 542
	609	612	487	547 468
	477	481		
MULTITECH	466	481	487	575
MURPHY	601			
NAD	547			
NATIONAL	507			
NEC	504	505	576	
NECKERMANN	450	469	470	477 491
	493	496	505	
NECKERMANN	509	510	512	513 519
	528	541	565	575 610
	611	616		

Codes Video				
NEI	575			
NESCO	487			
NIKKAI	466			
NIKKO	481			
NOBUKO	606			
NOKIA	450	468	470	483 488
	489	503	504	505 510
	516	517	518	547 551
	553	554	557	567 600
	601	603	604	500 503
	504	505	515	521 524
	574	602		
NOVATRONIC	575			
OCEANIC	483	489	601	604
OKANO	487			
OLYMPIC	466			
OLYMPUS	507			
ORION	481	509	531	536 537
	538	558	559	560 561
	589	591		
OTTO VERSAND	527	474	493	496 508
	512	513	541	544 565
	575	599	609	610 611
	612	616	620	621
PAEL	606			
PALLADIUM	481	487	491	505 507
	508	527	532	533 549
	600	601	623	
PATHE MARCONI	503	505		
PAXSONIX	547			
PENNEY	477	481	527	547
PENTAX	477			
PERSHIN	606			
PHILCO	481	507	527	547
PHILIPS	481	491	507	528
PHILIPS	529	530	547	548
PHILIPS	550	563	564	565
PHILIPS	568	575	620	621
PHILIPS	624	625		
PHILIPS (F)	491	565	575	
PHONOLA	527			
PILOT	481			
PIONEER	477	527	539	575
PRIMA	505	547		
PROFEX	487	490	529	
PROFILE	547			
PROSCAN	477	481	483	547
PROTEC	487			
PULSAR	481	547		
PULSER	468	481	547	
PYE	565	575		
QTY1	592			
QUARTER	468			
QUARTZ	481	547		
QUASAR	507	527		
QUELLE	450	459	461	464
	470	471	474	477
QUELLE	478	484	487	491
	496	497	503	504
	505	508	509	510
	512	513	519	528
	529	541	565	575
	599	604	606	609
	610	611	612	614
	616	621		
QUESTAR	466			
RADIALVA	481	487	527	
RADIOLA	527	575		
RADIONETTE	601	604		
RADIX	497			
RANDEX	481			
RANDIU	481			
RANK/BUSH/MURPHY	601			
RCA	477	481	483	547
REALISTIC	468	481	547	
REDIFFUSION	601			
REX	503	505		
RICOH	481			
ROADSTAR	481	487	547	617
ROYAL	466	487		

# Code list

## Codes Video

<b>SABA</b>	499	503	504	505	
SABA	515	521	524	540	
SABA	574	601	603		
SAISHO	486	509	575		
SALORA	467	468	470	483	
SALORA	516	517			
SAMBERS	606				
SAMEX	547				
SAMSUNG	510	547	575	575	597
SANKY	487				
SANSUI	487	505	575		
SANWA	509				
SANYO	468	469	470	471	551
	577	586			
<b>SBR</b>	527				
SCHAUB LORENZ	450	468	483	505	
SCHNEIDER	477	478	481	487	510
	527	529	530	563	564
	569	571	573	575	578
	581	582	604		
<b>SCOTT</b>	481				
SEARS	468	477	481		
SEG	487	490	510	547	
SEI-SINUDYNE	509	528			
SELECO	503	504	505	545	
SENTRA	466				
SETRON	466	487			
SHARP	468	544			
SHINTOM	487				
SHIVAKI	481	575			
SHOGUN	547				
SHORAI	509				
SICE	609	612			
SIEMENS	459	461	462	464	468
	469	470	472	479	480
	481	486	491	492	493
	494				
<b>SIEMENS</b>	495	496	497	498	511
	525	530	584	607	609
	610	611	612	614	
<b>SILMA</b>	575				
SILVA	481				
SINGER	487	547	575	616	
SINUDYNE	509	513	527	575	599
SOLAVOX	466	604			
SONOKO	575				
SONOLOR	601				
SONTEC	481				
SONY	506	512	513	514	541
	599	623			
<b>SR1000</b>	547				
STS	477				
SUNWOOD	487				
SYLVANIA	527				
SYMPHONIC	481	487	527		
<b>TAISHO</b>	509				
TALENT	609	612			
TANDBERG	623				
TANDY	468				
TASHIKO	528	529			
TATUNG	505	527			
TEAC	505				
TEC	466				
TECHLINE	487				
TECHNICS	527	532			
TECHNILAND	575				
TECHNISAT	563				
TEKNANT	575				
TEKNIKA	481				
TELEAVIA	503				
TELEAVIA	505				
TELEFUNKEN	500	503	504	505	515
	521	524	574	579	594
<b>TELEORDER</b>	547				
TELERENT	505				
TELESERVICE	609	612			
TELETECH	487				
TENOSAL	487				
TENSAI	481	487	490	509	575
THOMAS	547				
THOMSON	499	500	503	504	505

## Codes Video

<b>THOMSON</b>	524	574	594	606	226
THORN	474	482	501	503	505
	542	565	575	586	604
	606	609	612		
<b>THORN-FERGUSON</b>	501	503	504	505	575
	601	604	606	609	612
<b>TOKAI</b>	481	487			
TOSHIBA	474	481	505	527	547
TOTEVISION	481	547			
TOWADA	487	490			
TOWIKA	487				
TRIAD	575				
TRIX	481				
TVA	466				
<b>UHER</b>	466	477	481	503	505
	510	543			
<b>ULTRAVOX</b>	450	616			
UMA	565	575	601	604	
UMA	606	609	612	614	
UNITECH	547				
UNITED	560				
UNIVERSUM	481	483	491	527	530
	547	571	575	606	609
	612	621			
<b>UNIVOX</b>	604				
<b>VICTOR</b>	505	545			
VIDEOMASTER	466				
VIDEOPLUS	554	562	589		
VIDEOSONIC	547				
VIEWMARK	481				
VIEWMAX	481				
<b>WARDS</b>	477	487	547		
WEGAVOX	575				
WELTBlick	481				
WHITE WESTINGHOUSE	450	565			
WINSTON	575				
WIZJA	528				
WORLDVIEW	575				
<b>XR1000</b>	487	547			
<b>YAMISHI</b>	487				
YOKAN	487				
YOKO	466	481	487	490	
	510	547			
<b>ZENITH</b>	481				

## Codes DVD-Player

<b>METZ</b>	204	239			
<b>AKAI</b>	214				
<b>BLUESky</b>	254				
Boxford	256				
<b>CYBER HOME</b>	223				
Cytron	247				
<b>DENON</b>	216	230			
D-i-K	243				
DUAL	248				
<b>EMERSON</b>	263				
<b>GAME</b>	253				
GOLDSTAR	262				
GRAND PRIX	255				
GRUNDIG	222	232	238		
<b>HARMAN/KARDON</b>	206				
HITACHI	205	210	260	261	
<b>JVC</b>	212				
<b>KENWOOD</b>	208	246	231	263	
KISS	270				
<b>LABWAVE</b>	200	201			
LG	263				
LINN	215				
LOEWE	219				
<b>MARANTZ</b>	218	219	236		
MbyN	271	272			
MEDIENCOM	241				
MEDION	221	228			
MEGATON	240				



# Code list

## Codes DVD-Player

MUSTEK	256	257	258		
MYRYAD	269				
<b>NAD</b>	207				
NONAME	228				
<b>ONKYO</b>	209	225	226		
ORION	266				
<b>PANASONIC</b>	216	267	274	275	276
PHILIPS	219	220	227	233	234
	235	236	237	278	
PIONEER	203	204	249	250	251
PROLINE	228	273			
<b>SAMSUNG</b>	210	268			
SCHAUB LORENZ	255				
SCHNEIDER	244	248	263		
SEG	201				
SHERWOOD	224	263			
SILVA SCHNEIDER	243				
SONY	211	229	264	265	
SUNKAI	242				
<b>TECHNICS</b>	216	217			
TEVION	228	259			
THOMSON	213	277			
TOSHIBA	202	245	246		
<b>UNITED</b>	252	255	266		
<b>YAMAHA</b>	216	278	234		

## Codes HIFI - CD

<b>AIWA</b>	815	816	817	884	
AKAI	856	857	872	921	
AKKAI	856				
AMSTARD	957				
AMSTRAD	929	940	942	956	
ARCAM	908				
ASWO	909				
<b>BANG &amp; OLUFSEN</b>	808				
BRAUN	975	976			
BUSH	888				
<b>CAMBRIDGE</b>	945				
CAMBRIDGE AUDIO	945				
CARVER	908				
<b>DAEWOO</b>	876				
DENON	801	812	845	846	853
	899	900	901	961	962
DIORA	949				
DUAL	822	832	859	994	
<b>FISCHER</b>	830	831	920	953	
<b>GOLDSTAR</b>	885				
GOODMANN'S	872				
GOODMANS	888				
GRUNDIG	908	911	912	913	
<b>HARMAN KARDON</b>	905	931	934	935	
HITACHI	853				
<b>INTERSOUND</b>	960				
ITT	937				
<b>JVC</b>	844	848	849	902	903
	904	992			
<b>KENWOOD</b>	820	847	858	859	877
	878	879	925	948	963
KRELL	908				
<b>LINN</b>	908	964			
LUXMAN	924	946	967		
<b>METZ HE 11</b>	882				
MARANTZ	833	908			
MATSUI	908				
MEDION	955				
MERIDIAN	908				

## Codes HIFI - CD

MAGNAVOX	908				
MICROMEGA	908				
MINOWA	972				
MISSION	908	909			
MTC	955				
<b>NAD</b>	947				
NAIM	908				
NAKAMICHI	930				
NOKIA	938				
NONAME	888				
NSM	802	803	804	805	806
	807				
<b>OKANO</b>	869	871			
ONKYO	819	827	861	881	
<b>PALLADIUM</b>	810	851	866	870	
PANASONIC	834	915	918		
PHILIPS	833	908	909	911	965
PIONEER	824	825	826	850	862
	863	864	922	923	
PMG	906				
PROTON	908				
<b>QUAD</b>	908	965			
<b>RADIOTONE</b>	958				
RADMOR	911				
REVOX	829				
REVOX/STUDER	910				
ROTEL	818	908			
<b>SABA</b>	926				
SAE	908				
SAMSUNG	939	951	966	968	
SANSUI	908				
SANYO	852	860	919		
SCHNEIDER	821	840	841	868	869
	870	873	885	888	892
	911	927	928	929	955
	959	960	972	973	977
	978	979	980	981	982
	983	984	985	986	987
	988	989			
SHARP	799	800	813	847	
SHERWOOD	936	943	944		
SIEMENS	833	867	868	869	872
	873	874	875	876	880
	883	885	886	887	889
	890	891	969	970	971
<b>SINOTEC</b>	892				
SINOTEC (PEPSI-DOSE)	892				
SONY	842	843	893	895	896
	897	898	932	990	991
<b>SUPERTECH</b>	888	945			
SYLVANIA	908				
<b>T+A</b>	882	974			
T+A ELECTROAKUSTIK	882				
TECHNICS	809	916	917	918	
	950	993			
TENSAI	954				
THOMSON	823				
<b>UHER</b>	814				
UNIVERSUM	869	872	908	952	966
	979				
UNKNOWN	995				
<b>YAMAHA</b>	828	854	855	933	941

## Codes HIFI - Tape

AIWA	842	843	844	962	963
AKAI	845	849	913	933	
934	945	951	987		
AMSTRAD	916				
ASWO	976				
<b>BANG &amp; OLUFSEN</b>	836				
BRAUN	870				

# Code list

## Codes HIFI - Tape

BUSH	835				
DAEWOO	907				
DENON	834	840	841	879	891
	892	970	971	972	
DIORA	899	900			
DUAL	837	850	851	935	936
FISCHER	893	894	985	998	
GOLDSTAR	964				
GOODMANN'S	833				
GOODMANN'S	867				
GRUNDIG	976	979	980		
HARMAN KARDON	926	984			
HITACHI	915	931			
ITT	918	919			
JVC	862	863	974	975	
	994	995	996	997	
KENWOOD	848	917	935	936	
	957	958	990	993	
LINN	888	889			
LUXMAN	876	877	884	989	
METZ HE11	961				
MARANTZ	887	922	999		
NAD	903	904	905	906	
NAKAMICHI	927				
NOKIA	920				
OKANO	948	949			
ONKYO	846	847	856	901	902
	959	960			
PALLADIUM	944				
PANASONIC	928	929	982		
PHILIPS	921	976	980	999	
PIONEER	853	854	855	912	938
	939	941	942	943	988
RADMOR	978				
REVOX	860	861			
REVOX/STUDER	977				
SAMSUNG	883	885	886	896	
	897				
SANY	985				
SANYO	930	937	986		
SCHNEIDER	866	867	868	869	872
	873	874	878	918	919
	947	964	976		
SHARP	839	864	993		
SHERWOOD	890	908	909	910	911
	923				
SIEMENS	880	881	882	946	947
	950	951	952	953	954
	955	956	964	976	
SONY	865	925	965	966	967
	968	969	991	992	
T+A	871	961			
TECHNICS	838	898	981	983	
THOMSON	852				
UNIVERSUM	868	875	886	895	947
	950				
YAMAHA	857	858	859	914	924
	932				

## Codes HIFI - Tuner

AIWA	376	377	745		
AKAI	734	737	993		
AMSTRAD	452	455	464	468	469
ASH	744				
ASWO	427				

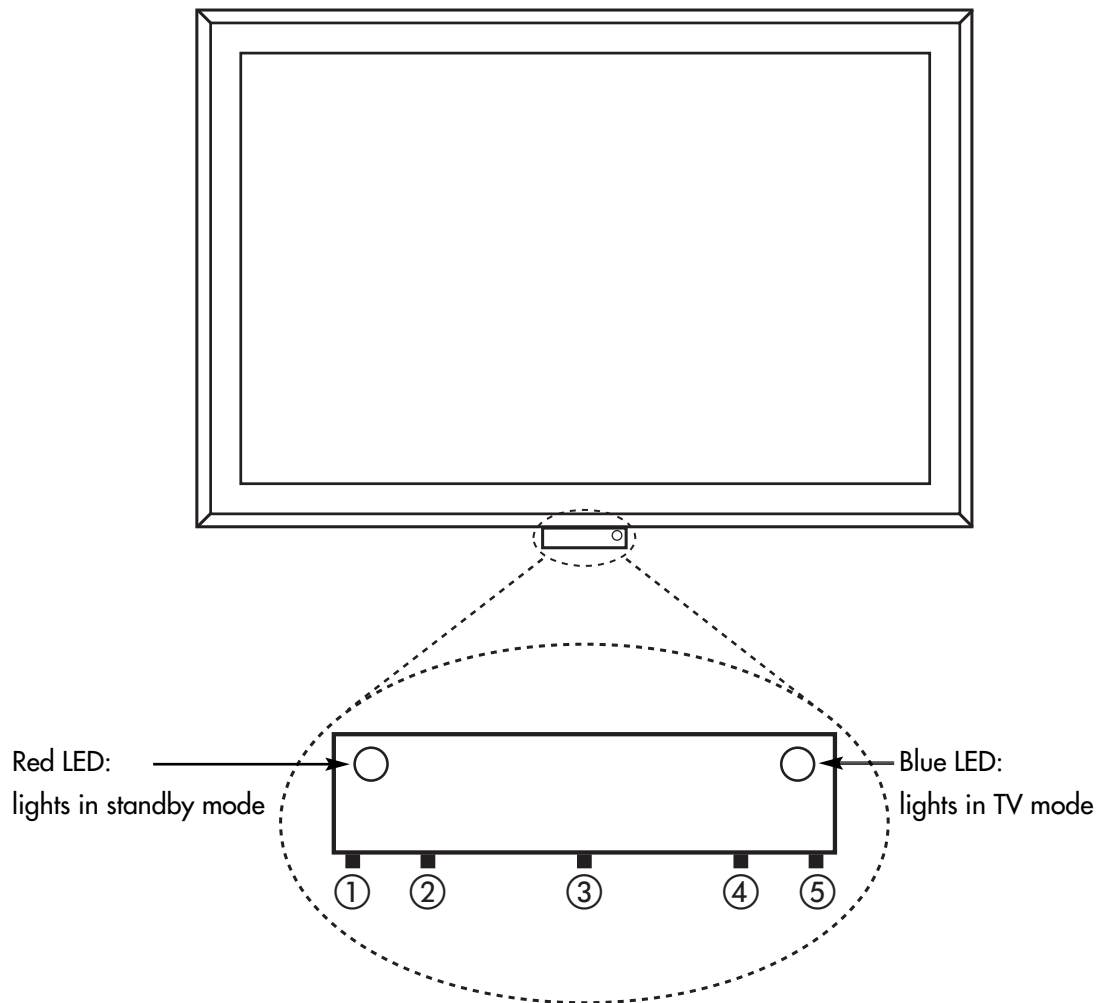
## Codes HIFI - Tuner

BANG & OLUFSEN	369				
BUSH	748				
DAEWOO	458	739			
DENON	371	372	423	424	445
	471	991			
DIORA	461				
DUAL	370	381	994		
FISCHER	434	449			
GOLDSTAR	746				
GOODMANN'S	737				
GOODMANN'S	748				
GRUNDIG	427	429	450		
HARMAN KARDON	418	730			
HITACHI	453	991			
ITT	412				
JVC	414	425	444	447	448
KENWOOD	417	439	446	740	741
	994				
LINN	472				
LUXMAN	438	474			
METZ HE11	743				
MARANTZ	450				
MINOWA	409				
MISSION	426				
NOKIA	410				
NAD	459				
NAKAMICHI	419				
NONAME	748				
OKANO	733	736			
ONKYO	379	440	460	742	
PALLADIUM	731	735			
PANASONIC	371	432	451		
PHILIPS	427	450			
PIONEER	383	384	436	437	996
	997	998	999		
REVOX	386				
REVOX/STUDER	427				
RADMOR	428				
ROTEL	378				
SAMSUNG	411	463	465	473	475
	476				
SANYO	433	990	995		
SCHNEIDER	374	380	388	390	391
	392	393	394	395	396
	397	398	399	400	401
	402	403	404	407	408
	409	412	441	442	443
	469	470	732	733	735
	746	748	749		
SHARP	373	446			
SHERWOOD	413	456	457		
SIEMENS	426	427	477	478	479
	480	732	733	737	738
	739	746	747		
SINOTEC	749				
SINOTEC (PEPSI-DOSE)	749				
SONY	389	416	420	421	422
SUPERTECH	466				
T+A	405	743			
TECHNICS	387	430	431	462	
TENSAI	406				
THOMSON	382				
UHER	375				
UNIVERSUM	403	467	473	733	737
YAMAHA	385	415	435	454	992

## Code list

Codes HI-FI - Amp.					Codes HI-FI - Amp.				
<b>A</b> IWA	777	985	986		SIEMENS	947	948	950	
AKAI	753	754	766		SINOTEC	786			
AMSTRAD	785	813	829	831 840	SINOTEC (PEPSI-DOSE)	786			
ASH	776				SONY	787	788	974	991
ASWO	793				SUPERTECH	782			
<b>B</b> ANG & OLUFSEN	996				<b>T</b> +A	774	959		
BRAUN	960				TECHNICS	805	806	836	976 993
BUSH	748	782			TENSAI	958			
<b>D</b> AEWOO	770				THOMSON	980			
DENON	751	789	790	791 817	<b>U</b> HER	987			
	988				UNIVERSUM	763	766	838	844 963
DIORA	835				<b>Y</b> AMAHA	752	809	824	830 979
DUAL	952	981	995						
<b>F</b> ISCHER	750	820	839						
<b>G</b> RUNDIG	794	795	804						
GOODMANN'S	749	766	782						
GOLDSTAR	779								
<b>H</b> ARMAN KARDON	760	823							
HITACHI	751								
<b>I</b> TT	827								
<b>J</b> BL	821	975							
JVC	792	816	819						
<b>K</b> ENWOOD	755	771	818						
<b>L</b> INN	794	795							
LUXMAN	810	845	954	955					
<b>M</b> ETZ HE11	774								
MARANTZ	794	795	798						
MEDION	785								
MERIDIAN	795								
MINOWA	978								
MISSION	799								
<b>N</b> OKIA	826								
NAD	834								
NAKAMICHI	822								
NIAM	795								
NONAME	782								
<b>O</b> KANO	763	765							
ONKYO	772	982							
<b>P</b> ALLADIUM	761	783	991						
PALLADIUM/OKANO	764								
PANASONIC	805	808	994						
PHILIPS	793	794	795	796 797					
	798	803	992						
PIONEER	757	758	795						
PRO-LOGIC	957								
<b>Q</b> UAD	795								
<b>R</b> ADIOTONE	841								
RADMOR	801	802	803						
REVOX	843	977							
REVOX/STUDER	796	797	798						
ROTEL	983	984							
<b>S</b> ABA	811								
SAMSUNG	828	837	844	846					
SANYO	750	756							
SCHNEIDER	763	764	768	779 782					
	783	784	785	786 794					
	812	813	814	815 827					
	840	842	951	953 956					
	961	962	963	964 965					
	966	967	968	969 970					
SCHNEIDER	971	972	973	978					
SHARP	818	990							
SHERWOOD	825	832	833						
SIEMENS	762	763	766	767 768					
	769	770	775	779 780					
	781	784	785	794 800					

## Local Controls

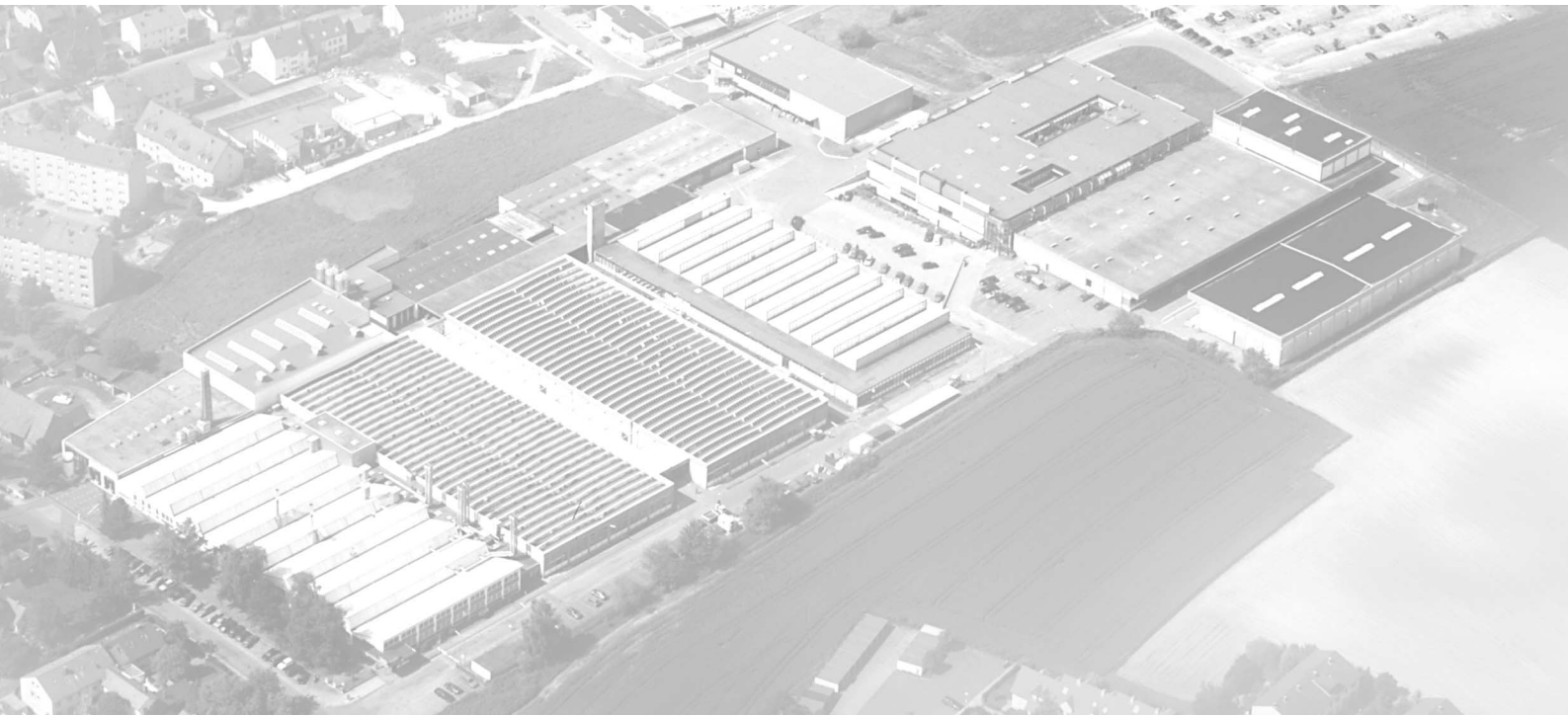


①	Previous programme position	In menu: cursor down
②	Next programme position	In menu: cursor up
③	Volume -	In menu: back to previous menu
④	Volume +	In menu: next menu
⑤	Switch on from standby mode	Open menu









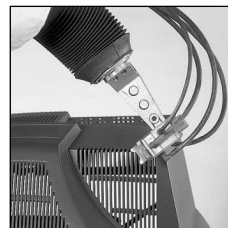
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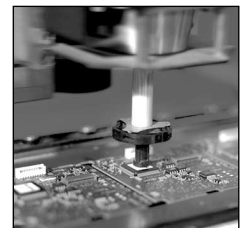
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Industrieelektronik